

Faculty of Engineering & Technology

Plant Engineering and Maintenance

Information :

Course Code : MPR 561

Level : Undergraduate

Course Hours : 2.00- Hours

Department : Specialization of Mechatronics Engineering

Instructor Information :

Title	Name	Office hours
Associate Professor	Hassan Mohamed Shams Eldin Elsayed Eleashy	4
Assistant Lecturer	Rana Mohamed Abdel Rahman Saleh	2

Area Of Study :

- Introduce students to fundamentals and concepts of Modern Plant Engineering and Maintenance.
- Enrich the students' knowledge about different maintenance management systems.
- Train students to search for Modern Maintenance topics through Self-Learning.

Description :

Plant engineering, Utilities, Energy and power systems, Material handling and storage, Environmental control, Waste disposal, Pollution control, Industrial maintenance, Corrective and predictive maintenance, Spare parts inventory control.

Course outcomes :

a. Knowledge and Understanding: :

- 1 - Identify different elements of modern Plant Engineering and Maintenance Management and Control.
- 2 - Describe the relation between Maintenance and other Plant Engineering activities.
- 3 - Explain the different Maintenance Management Systems encounter in modern industry.

b. Intellectual Skills: :

- 1 - Distinguish between different Maintenance Management Systems.
- 2 - Examine the suitability of Modern Maintenance Systems for different fields of industrial applications.
- 3 - Select the proper Computer Maintenance Management System (CMMS) for a given industrial application.

c. Professional and Practical Skills: :

- 1 - Analyze characteristics of the different Modern Maintenance Management Systems.
- 2 - Prepare and Present technical reports on Modern Maintenance.

d. General and Transferable Skills: :

- 1 - Work in stressful environment and within constraints through assignments and term papers.
- 2 - Communicate effectively through technical reports and representations.
- 3 - Search for information and engage in life-long self-learning discipline through self-study tasks.

Course Topic And Contents :

Topic	No. of hours	Lecture	Tutorial / Practical
Introduction to Plant Engineering and Maintenance.	3	2	1
Types of Maintenance and Strategies.	6	4	2
Maintenance Organizations.	9	6	3
Quality and Safety in Maintenance.	9	6	3
Maintenance Materials Control.	6	4	2
Maintenance Costing.	6	4	2
Computerized Maintenance Management Systems (CMMS).	6	4	2

Teaching And Learning Methodologies :

Interactive Lecturing

Problem solving

Discussion

Term Paper

Research

Course Assessment :

Methods of assessment	Relative weight %	Week No	Assess What
Assignment	5.00		
Final Exam	40.00		
First Midterm Exam	15.00		
Quizzes	10.00		
Report	10.00		
Research	5.00		
Second Midterm Exam	15.00		

Course Notes :

Lecture notes on the course Moodle page, FUE website.